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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
EHICHIOYA, FRED I	
ART UNIT	**PAPER NUMBER**
2162	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,823	FITZPATRICK ET AL.	
	Examiner	Art Unit	
	Fred I. Ehichioya	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks/Response to Arguments

1. Applicant's arguments, with respect to claims 1 – 30, filed November 01, 2004 have been fully considered but they are not persuasive for the following reasons.

Applicants add new claims 27 – 30.

This Office Action is consistent with Office Actions of January 2, 2004, May 18, 2004, June 30, 2004 and telephone interview of June 8, 2004. There are no new references introduced. Claims 27 – 30 include limitations "intra- table referential integrity" that was not originally presented in the claim language. This claim limitation is not consistent with the specification as defined by the applicants in the present arguments/remarks of November 1, 2004. See remarks section of this Office Action. Therefore, last Office Actions are proper which are hereby incorporated in this Office Action.

Remarks

2. Applicants introduced "intra-table referential integrity" in the newly added claims 27 – 30. This limitation was not previously presented or defined within the original claims presented.

Applicants in the current remarks/arguments on page 9, paragraph 2 defines intra-table referential integrity as "the term used for the disclosed concept within the title of the application". Applicants further state on page 11, paragraph 3, "As an example of intra-table referential integrity (often called intra-table record association in the specification) as noted at page 8, lines 14 – 28".

Examiner hereby object to this term "intra-table referential integrity" within the claim limitations since examiner does not see where "intra-table referential integrity" is often called "intra-table record associations" on page 8, lines 14 – 28 in the specification as stated by the applicants. Examiner also object to this term "intra-table referential integrity" within the claims since this term is only used within the title as a "concept" as disclosed by the applicants instead of being used for useful, concrete and tangible result:

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." ***State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02.*** *The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or* ***concept****, or is simply a starting point for future investigation or research* ***(Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993))****. Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.*

Since intra-table referential integrity was not originally defined in the specification or claims, other than being used as a concept within the title, examiner needs a clarification or explicit definition of intra-table referential integrity in the response to this Office Action.

3. Applicants argue:

(a) Flake, however, makes no reference that associations are to be made within a SINGLE RDMS table (Page 15, Para 1).

(b) Flake fails to teach, "associated records within a single RDBMS table are selectively purged" (page 16, paragraph 1).

(c) Flake provides no teachings relating to intra-table record associations (page 16, paragraph 1).

(d) Vijaykumar provides no teaching regarding "disassociating selected records from a set or association defined for a single table (intra-table referential integrity –novel)" (page 17, paragraph 2).

Regarding argument (a): Flake states association between queues (column 8, lines 40 – 43). Flake defines queues as a working list (column 8, lines 36 – 38). One of ordinary skill in the art knows that list is a table; therefore, Flake suggested the associating said plurality of records as a set within said single table. (see column 8, lines 33 – 67).

Regarding argument (b): Examiner does not see this limitation in claims 1, 19 and other independent claims; However, Flake discloses responsive to triggering condition as shown in column 8, lines 43 – 47. Flake also discloses removing or selectively purging non-identified related records of said set from single table as shown in column 14, lines 45 – 49 and column 15, lines 8 – 15).

Regarding argument (c): Examiner does not see the claim limitation "relating to intra-table records" in claims 1, 19 and other independent claims. However, applicants state on page 11, lines 24 – 26 of the specification that the invention is not so limited to using a particular mechanism for identifying intra-table record association. Accordingly, any suitable method could be used. As state in the response to argument (a), Flake teaches association between tables as disclosed in (column 8, lines 36 – 38).

Regarding argument (d): Please see Remarks section above. Applicants have not explicitly defines intra-table referential integrity. Vijaykumar teaches disassociating as shown in column 9, lines 54 – 67).

4. In view of the above, the examiner contends that all limitations as recited in the claims have been addressed in this Office Action. For the above reasons, Examiner believed that rejection of the last Office action was proper.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1 - 4, 7 - 11, 13 - 16, 18, 19 - 22, and 25 - 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,978,770 issued to Waytena et al (Hereinafter "Waytena") in view of USPN 5,832,451 issued to Flake et al (hereinafter "Flake").

Regarding claims 1 and 19, Waytena teaches in a relational database management system (RDBMS), a method of processing related records comprising:

receiving a plurality of related records (see Fig.2D and column 10, lines 4 – 20);

inserting said plurality of related records into a single table of an RDBMS (see column 10, lines 63 – 67 and column 23, lines 40 – 67); and

responsive to a triggering condition, selectively purging particular related records of said set from said single table (see column 3, lines 23 – 37).

Waytena does not explicitly teach associating said plurality of related records as a set within said single table using a published function of said RDBMS; and

responsive to a triggering condition that identifies at least one of plurality of related records, selectively purging non-identified related records of said set from single table.

Flake teaches associating said plurality of related records as a set within said single table using a published function of said RDBMS (see column 8, lines 33 – 67); and

responsive to a triggering condition that identifies at least one of plurality of related records (see column 8, lines 43 – 47), selectively purging non-identified related records of said set from single table (see column 13, line 60 through column 14, line 49).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Flakes's teaching of responsive to a triggering condition that identifies at least one of plurality of related records" would have allowed Waytena's system to maintain information retrieved from a plurality of computer reservation systems, in relation database. In response to a customer's request, the system automatically retrieves, and displays for decision-making all pertinent information retrieved from customer's business entity profile as suggested by Flakes at column 2, lines 18 - 25.

Regarding claims 2 and 20, Flakes teaches wherein the triggering condition identifies at least one of said plurality of related records and said purging step purges non-identified related records of said set (see 8, lines 33 – 47, and column 13, line 60 - column 14, lines 49).

Regarding claims 3 and 21, Waytena teaches wherein said purging step purges each one of said plurality of related records (see column 3, lines 23 – 27).

Regarding claims 4 and 22, Waytena teaches wherein said table includes a data type for specifying said plurality of related records and said associating step further comprises assigning to each one of said plurality of related records a common identifier conforming with said data type, wherein said common identifier is unique to said set (see column 10, lines 21 – 30).

Regarding claims 7 and 25, Flake teaches said associating step further comprising:

associating selected records of said set as a subset wherein said particular related records of said purging step include at least one selected record of said subset (see column 8, lines 33 – 67 and column 9, lines 1 – 18).

Regarding claims 8 and 26, Waytena teaches in a relational database management system (RDBMS), a method of processing related records comprising:

receiving a plurality of related records (see Fig.2D and column 10, lines 4 – 20);

inserting said plurality of related records into a single table of an RDBMS (see column 10, lines 63 – 67 and column 23, lines 40 – 67); and

Waytena does not explicitly teach associating said plurality of related records as a set within said single table, wherein each one of said plurality of related records is assigned a common identifier unique to said set which conforms to a data type in said table for associating said plurality of related

records and responsive to a triggering condition identifying at least one of said plurality of related records, selectively purging particular non-identified related records of said set.

Flake teaches associating said plurality of related records as a set within said single table, wherein each one of said plurality of related records is assigned a common identifier unique to said set which conforms to a data type in said table for associating said plurality of related records (see column 8, lines 33 – 67).

responsive to a triggering condition that identifies at least one of plurality of related records (see column 8, lines 43 – 47), selectively purging non-identified related records of said set from single table (see column 13, line 60 through column 14, line 49).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Flakes's teaching of responsive to a triggering condition that identifies at least one of plurality of related records" would have allowed Waytena's system to maintain information retrieved from a plurality of computer reservation systems, in relation database. In response to a customer's request, the system automatically retrieves, and displays for decision-making all pertinent information retrieved from customer's business entity profile as suggested by Flakes at column 2, lines 18 - 25.

Regarding claims 9 and 14, Waytena teaches a relational database management system (RDBMS), comprising:

a purge record set processor for purging selected ones of said record set in said table responsive to a triggering condition (see column 3, lines 23 – 37).

Waytena does not explicitly teach a table for storing a plurality of records wherein particular ones of said plurality of records are related; an associate record set processor for associating said related ones of said plurality of records with one another as a record set within said table; and a second pre-defined table within said RDBMS for maintaining associations of said related ones of said plurality of records within said table as said record set.

Flake teaches a table for storing a plurality of records wherein particular ones of said plurality of records are related (see column 8, lines 49 – 55);

an associate record set processor for associating said related ones of said plurality of records with one another as a record set within said table (see column 8, lines 33 – 67); and

a second pre-defined table within said RDBMS for maintaining associations of said related ones of said plurality of records within said table as said record set (see column 14, line 58 through column 15, line 2).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Flakes's teaching of responsive to a triggering condition that identifies at least one of plurality of related records" would have allowed Waytena's system to maintain information retrieved from a plurality of computer

reservation systems, in relation database. In response to a customer's request, the system automatically retrieves, and displays for decision-making all pertinent information retrieved from customer's business entity profile as suggested by Flakes at column 2, lines 18 - 25.

Regarding claim 10, Flake teaches a second pre-defined table within said RDBMS for maintaining associations of said related ones of said plurality of records within said table (see column 14, line 58 thru column 15, line 2).

Regarding claims 11 and 16, Flake teaches said identifier is a data type (see column 8, lines 52 – 53).

Regarding claims 13 and 18, Waytena teaches said purge record set function deletes records linked to said purged records throughout said RDBMS (see column 3, lines 23 – 27).

Regarding claim 15, Flake teaches said pre-defined table includes an identifier for specifying related ones of said plurality of records (see column 8, lines 51 – 55).

7. Claims 5, 6, 12, 17, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waytena in view of Flake and further in view of USPN 5,499,359 issued to Narayanan Vijaykumar (hereinafter "Vijaykumar").

Regarding claims 5, 12, 17, 23, and 27 - 30 Waytena and Flake disclose the claimed subject matter as discussed in claims 1, 9 14 and 19 respectively.

Waytena or Flake does not explicitly teach disassociating selected records from said set responsive to a triggering condition.

Vijaykumar teaches disassociating selected records from said set responsive to a triggering condition (see column 9, lines 54 – 67).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine teaching of the cited references because Vijaykumar's teaching of "disassociating selected records from said set responsive to a triggering condition" would have allowed Waytena and Flake's system to maintain integrity between data tables. The system would include a preferred interface for defining referential integrity links between data tables as suggested by Vijaykumar at column 3, lines 25 - 40.

Regarding claims 6 and 24, Vijaykumar teaches deleting throughout said RDBMS, records linked to said purged records using referential integrity rules (see column 17, lines 55 – 67).

Regarding claims 27 and 28, Vijaykumar teaches wherein the associating step establishes an intra-table referential integrity among said related records, and wherein the intra-table referential integrity results in the purging step (see column 9, lines 35 – 67 and column 13, lines 46 – 60).

Regarding claims 29 and 30, Vijaykumar teaches wherein the associate record set processor establishes intra-table referential integrity among said related records, and wherein the intra-table referential integrity causes the purge record set processor to purge the selected ones of the records responsive to the triggering condition (see column 9, lines 35 – 67 and column 13, lines 46 – 60).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 571-272-4034. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred I. Ehichioya
Patent Examiner
Art Unit 2162

January 28, 2005

SHAHID ALAM
PRIMARY EXAMINER